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国产凤仙花属六新种*

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Six new species of *Impatiens* L. from China

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Key words *Impatiens* L.; *I. henanensis*; *I. anhuiensis*; *I. longicornuta*; *I. fanjingshanica*; *I. trichosepala*; *I. guizhouensis*; China; New species
关键词 凤仙花属; 中州凤仙花; 安徽凤仙花; 长角凤仙花; 梵净山凤仙花; 毛萼凤仙花; 贵州凤仙花; 中国; 新种

1 中州凤仙花 新种 图1

Impatiens henanensis Y. L. Chen, sp. nov. TYPE: China. Henan(河南), Yudong(豫东), 1959-09, Henan Pl. Exped.(河南植物普查队)3194(holotypus, PE). Fig. 1

Species haec videtur *I. linocentrae* Hand.-Mazz. proxima, sed a qua foliis elliptico-ovatis, basi subrotundatis, glandulis globosis 1～2-paribus instructis, margine serratis, nervibus lateralibus 7～11-paribus; pedunculis 2～3-floris; labello saccato, ad basim in calcar recurvum bifidum subtio attenuato bene differt.

Herba annua, 40～60 cm alta, glabra vel subglabra. Caulis erectus, viridis vel inferne purpurascens, ramosus, superne glanduloso-punctatus, nodis inferioribus dilatatis, radicibus fibrosis numerosis. Folia alterna, breviter petiolata, ovata vel elliptico-ovata, 8～15 cm longa, 2.5～6.5 cm lata, apice acuminata vel caudata, basi late cuneata vel subrotundata, glandulis globosis 1～2-paribus instructa, margine serrata, mucronulata, nervis lateralibus 7～11-paribus, arcuatis, supra intense viridis, subtus pallide viridis vel interdum purpurascens, utrinque glabra, costa nervisque subtus prominentibus; petiolus 5～15(20) mm longus, glaber. Pedunculi in axillis foliorum superiorum solitarii, foliis multo breviores, 2～3-flori; Pedicelli tenues, 5～15 mm longi, fructiferi leviter elongati, supra medium bracteati; bracteae ovatae vel ovato-lanceolatae, 4～5 mm longae, apice acutae, recurvatae, 3～5-nerviae, persistentes. Flores roseo-purpurei, 2～2.5 cm expansi. Sepala lateralia 2, oblique ovata vel ovata, 7～8 mm longa, 3～4 mm lata, apice rostrata, costa dorsalis anguste alata. Vexillum subobiculare, 7～8 mm diam., costa dorso incrassata, cristata, apice cuspidata. Alae breviter stipitatae, 18～20 mm longae, bilobatae; lobus basalis oblongus, apice obtusus, distalis dolabriformis; auricula dorsalis sublunata, parva, reflexa. Labellum saccatum,

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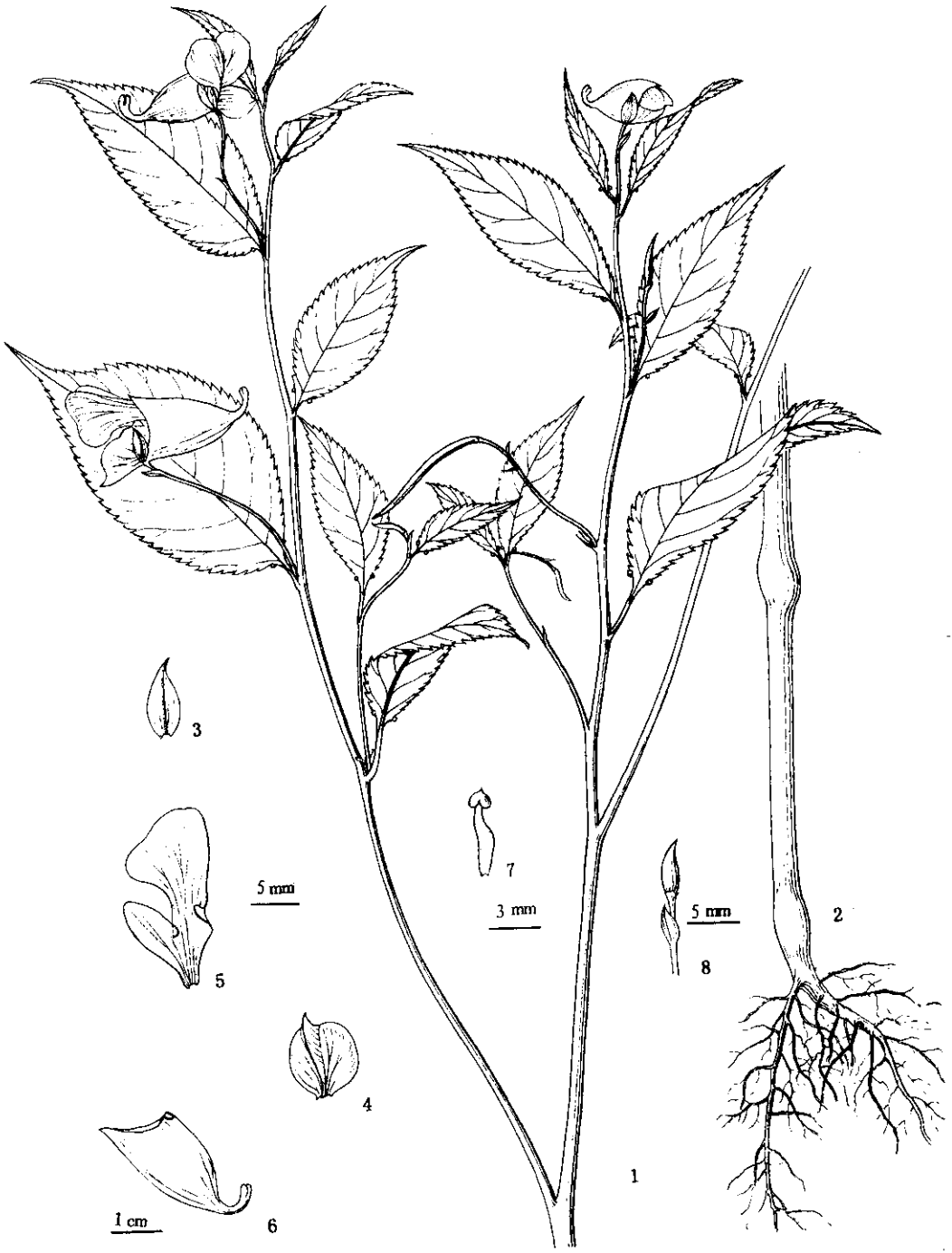

图 1　中州凤仙花　1～2. 植株；3. 侧生萼片；4. 旗瓣；5. 翼瓣；6. 唇瓣；7. 花药；8. 子房。（张泰利 绘）
Fig. 1　*Impatiens henanensis* Y. L. Chen　1～2. Plant; 3. Lateral sepal; 4. Standard; 5. Wing; 6. Lip; 7. Anther; 8. Ovary.

2.5～3 cm longum, ore obliquo 15 mm lato, antice acuto, basi in calcar 6～7 mm longum recurvum, bifidum subito attenuatum. Filamenta linearia, 5 mm longa; antherae ovoidea, apice obtusae. Ovarium fusiforme, erectum, 5 mm longum, rostellatum. Capsula lineari-cylindrica, 2.5～3 cm longa, polysperma. Semina oblonga, 4 mm longa, fusca, rugulosa.

Henan(河南): Shangcheng(商城), 1959-08-02, Henan Pl. Exped.(河南植物普查队)10504; Tongbai(桐柏), Taibaiding(太白顶), alt. 1200 m, 1956-08-09, J. Wang et S. Y. Wang(王建,王遂义)333, 358; Xinxian(新县), 1959-09, Henan Pl. Exped. 4889. **Shanxi**(山西): Jiangxian(降县), Lujiaping(炉家坪), alt. 1450 m, 1968-08-13, C. D. Teng(藤崇德)281.

本种与秦岭凤仙花 *I. linocentra* Hand.-Mazz. 近缘,但叶椭圆状卵形,基部近圆形,具1～2对球形腺体,边缘具锯齿,侧脉7～11对;花总梗具2～3花;唇瓣囊状,基部急狭成二裂的弯距,与后者容易区别。

2 安徽凤仙花 新种 图2

Impatiens anhuiensis Y. L. Chen, sp. nov. TYPE: China. Anhui(安徽), Yuexi(岳西), Baojiahe, Taipingxiang, Chuanling(包家河,太平乡,川岭), in ruprestis vallis, alt. 1200 m, 1953-09-22, S. Z. Yang et Z. Deng(杨世基,邓智)7006(holotypus, JSBI). Fig. 2

Species haec habitu et forma foliorum *I. henanensi* Y. L. Chen valde similis, sed a qua floribus roseis, sepalis lateralibus 4, exterioribus 2 late obliquo-ovatis, 5～7-nervibus, interioribus 2, anguste oblongis; vexillo costa dorso leviter incrassato, inconspicue carinato; labello late infundibulari, rubro-maculato bene differt.

Herba annua, 50～60 cm alta, glabra. Caulis erectus, superne ramosus, in sicco striatus. Folia alterna, petiolata, oblonga vel ovato-oblonga, submembranacea, 7～13 cm longa, 2.5～4 cm lata, apice acuminata vel caudata, basi late cuneata vel rotundata, glandulis stipitatis globosis 1～2-paribus instructa, margine crenato-serrata, mucronulata, nervis lateralibus 7～9-paribus, arcuatis, utrinque glabra; petiolus 1.5～3 cm longus. Pedunculi in axillis foliorum superiorum solitarii, foliis nulto breviores, saepe 2～3-flori vel interdum 1-flori abortivi. Pedicelli graciles, 1～2 cm longi, frutiferi paullo elongati, ad medium vel supra medium bracreati; bracteae herbaceae, viridies, ovatae, 3～4 mm longae, apice longe cuspidatae, persistentes, 5-nerves. Flores rosei, expansi 2～2.5 cm. Sepala lateralia 4, exteriora 2, oblique late ovata, 7 mm longa, 5 mm lata, apice acutiuscula, 5～7-nervia, interiora 2, anguste oblonga, 6 mm longa, 1.5 mm lata, apice obtusa. Vexillum suborbiculare, 11 mm longum, 10 mm latum, apice leviter emarginatum, basi subcuneatum. costa dorso paulo incrassata, inconspicue carinata, apice cuspidata. Alae subsessiles, 22～23 mm longae, bilobatae; lobus basalis suboblongus, apice rotundatus, distalis dolabriformis, obtusus; auricula dorsalis semi-orbicularis, inflexa. Labellum late infundibulare, 2.5～2.8 cm longum, rubo-maculatum, ore oblique adscendente, 15 mm lato, antice acuminato, cuspidato, basi in calcar 8～10 mm longum incuvatum, bifidum subito attenuatum. Filamenta linearia, 6 mm longa, superne complanata; antherae ovoidea, apice acutae. Ovarium fusiforme, erectum,

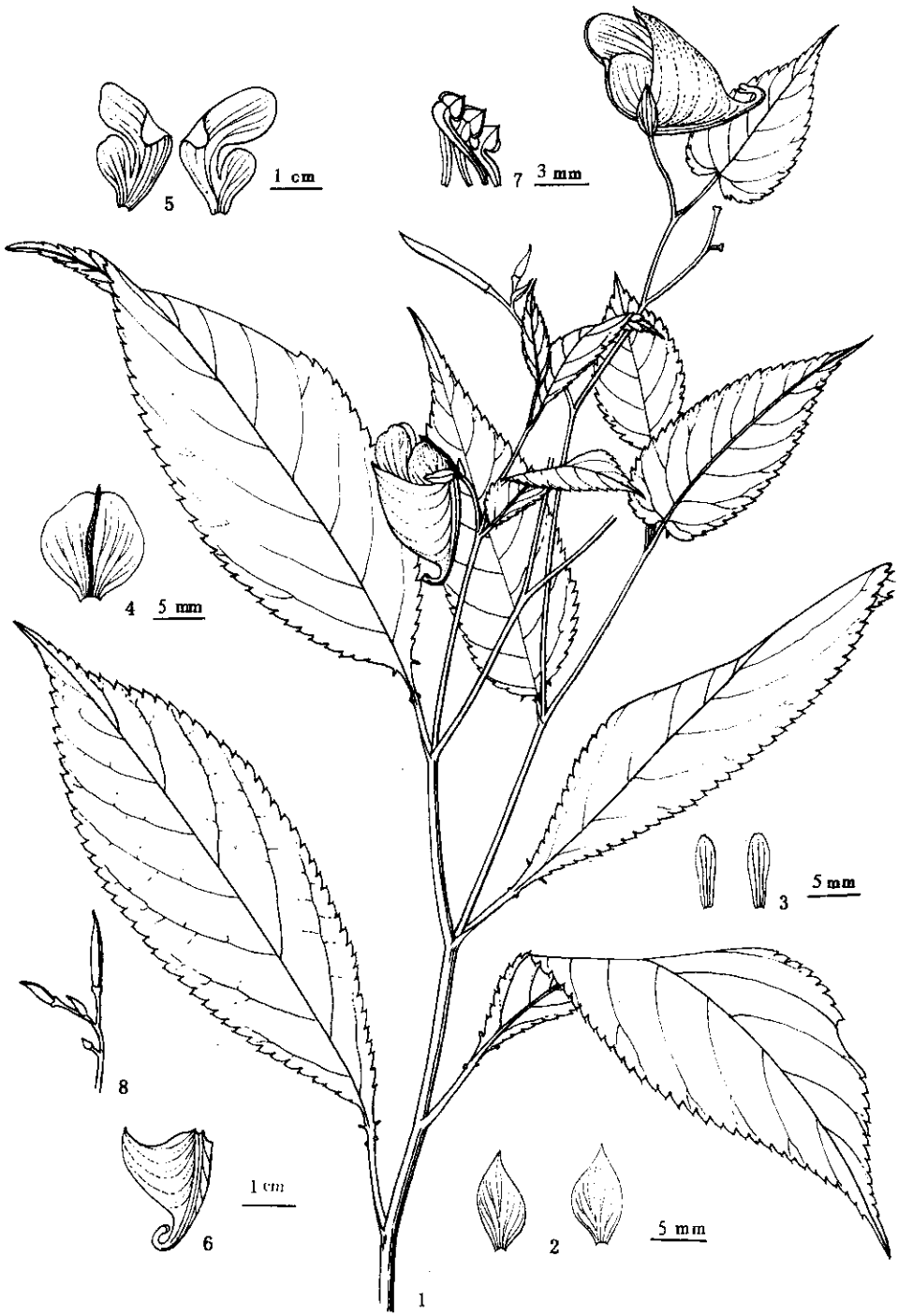

图 2　安徽凤仙花　1. 植株；2. 外层萼片；3. 内层萼片；4. 旗瓣；5. 翼瓣；6. 唇瓣；7. 花丝及花药；8. 子房。
Fig. 2　*Impatiens anhuiensis* Y. L. Chen　1. Plant; 2. Outer sepals; 3. Inner sepals; 4. Standard; 5. Wing; 6. Lip; 7. Filaments & anthers; 8. Ovary.

图3. 长角凤仙花 1~2. 植株；3. 侧生萼片；4. 旗瓣；5. 翼瓣；6. 唇瓣；7. 花丝及花药。(张泰利 绘)
Fig. 3 *Impatiens longicornuta* Y. L. Chen 1~2. Plant; 3. Lateral sepal; 4. Standard; 5. Wing; 6. Lip; 7. Filaments & anthers.

3~4 mm longum, rostratum. Capsulae lineari-cylindricae, 2.5~3 cm longae, apice rostratae, polyspermae. Semina oblongo-globosa, fusca, rugulosa.

本种体态和叶形甚似中州凤仙花 *I. henanensis* Y. L. Chen，但花粉红色，侧生萼片4，外面2枚宽斜卵形，具5～7条细脉，内面2枚狭长圆形；旗瓣背面中肋稍增厚，具不明显的龙骨状突起；唇瓣漏斗状，具红色斑点，与后者不难区别。

3　长角凤仙花　新种　图3

Impatiens longicornuta Y. L. Chen, sp. nov. TYPE: China. Hunan(湖南), Dongan(东安), Mt. Shunhuang(舜皇山), ad marginem rivulorum in valle, 1948-10-04, Y. Liu(刘瑛)892(holotypus, PE).

Species habitu *I. hunanensi* Y. L. Chen valde similis, sed a qua floribus majoribus(ad 3.5～4 cm expansis); sepalis lateralibus suborbicullaribus inaequilateralibus, apice cuspidatis; vexillo cucullato, ellptico-oblongo, costa dorso conspicue incrassato, cristata, apice in cornu ad 1 cm elongata; Alae lobis basilaribus late ovatis apice acutis differt.

Herba annua, 40～60 cm alta, glabra. Caulis succulentus, robustus, erectus, simplex, nodis inferioribus distincte dilatatis, radicibus fibrosis numerosis. Folia alterna, petiolata, membranacea, ovata vel ellptico-ovata, 5～13 cm longa, 3～5.5 cm lata, apice acuminata, basi late cuneata, margine crenato-dentata, mucronulata, nervis lateralibus 5～7-jugis, arcuatis, supra intense viridia, sparse adpresse hispidula, subtus cinereo-viridia, glabra. costa nervisque subtus distincta; Petiolus 1～2 cm longus, glaber. Pedunculi in axillis foliorum superiorum solitarii, foliis multo breviores, 2～3-rarius 4-flori. Pedicelli graciles, 15～25 mm longi, fructiferi paullo elongati, ad basim bracteati; bracteae late ovatae, 2～3 mm longae, cuspidatae, persistentes. Flores majores, flavi, ad 3.5～4 cm expansi. Sepala lateralia oblique ovata vel subrotundata, 3～3.5 mm in diametro, apice cuspidata, basi inaequilateralia, 3～5-nervia. Vexillum cucullatum, ellptico-oblongum, 22 mm longum, 14～15 mm latum, costa dorso conspicue incrassata, cristata, crista apice in cornu ad 1 cm longum elongata. Alae stipitatae, 2.8～3 cm longae, bilobatae; lobus basalis late ovatus apice acutus, distalis dolabriformis; auricula dorsalis oblonga, reflexa. Labellum profunde saccatum, 3.2～3.5 cm longum, ore obliquo, 20 mm lato, antice acuminatto, basi suborbiculare, in calcar 10 mm longum recurvum subito attenuatum. Filamenta linearia, 9 mm longa, superne ampliata. Antherae ovoideae, apice acutae. Ovarium fusiforme, erectum, 7 mm longum, rostellatum. Capsulae(immatures)clavatae, 18～20 mm longae, rostellatae.

本种体态甚似湖南凤仙花 *I. hunanensis* Y. L. Chen，但花较大(长达3.5～4 cm)，侧生萼片近圆形，不等侧，顶端具小尖；旗瓣兜状，椭圆状长圆形，背面中肋明显增厚，具鸡状突起，顶端伸长成长达1 cm的长角；翼瓣基部裂片宽卵形，顶端急尖，与后者不同。

4　梵净山凤仙花　新种　图4

Impatiens fanjingshanica Y. L. Chen, sp. nov. TYPE: China. Guizhou(贵州), Fanjingshan(梵净山), in declivo herboso humido, alt. 1500 m, 1986-06-06, Sino-America Exped.(中美科考队)813(holotypus, PE). Fig.4

Species Habitu *I. commellinoidi* Hand.-Mazz. valde similis, a qua bracteolis ovatis, margine minute denticulatis; sepalis lateralibus apice conspicue cuspidatis; alis subsessilibus,

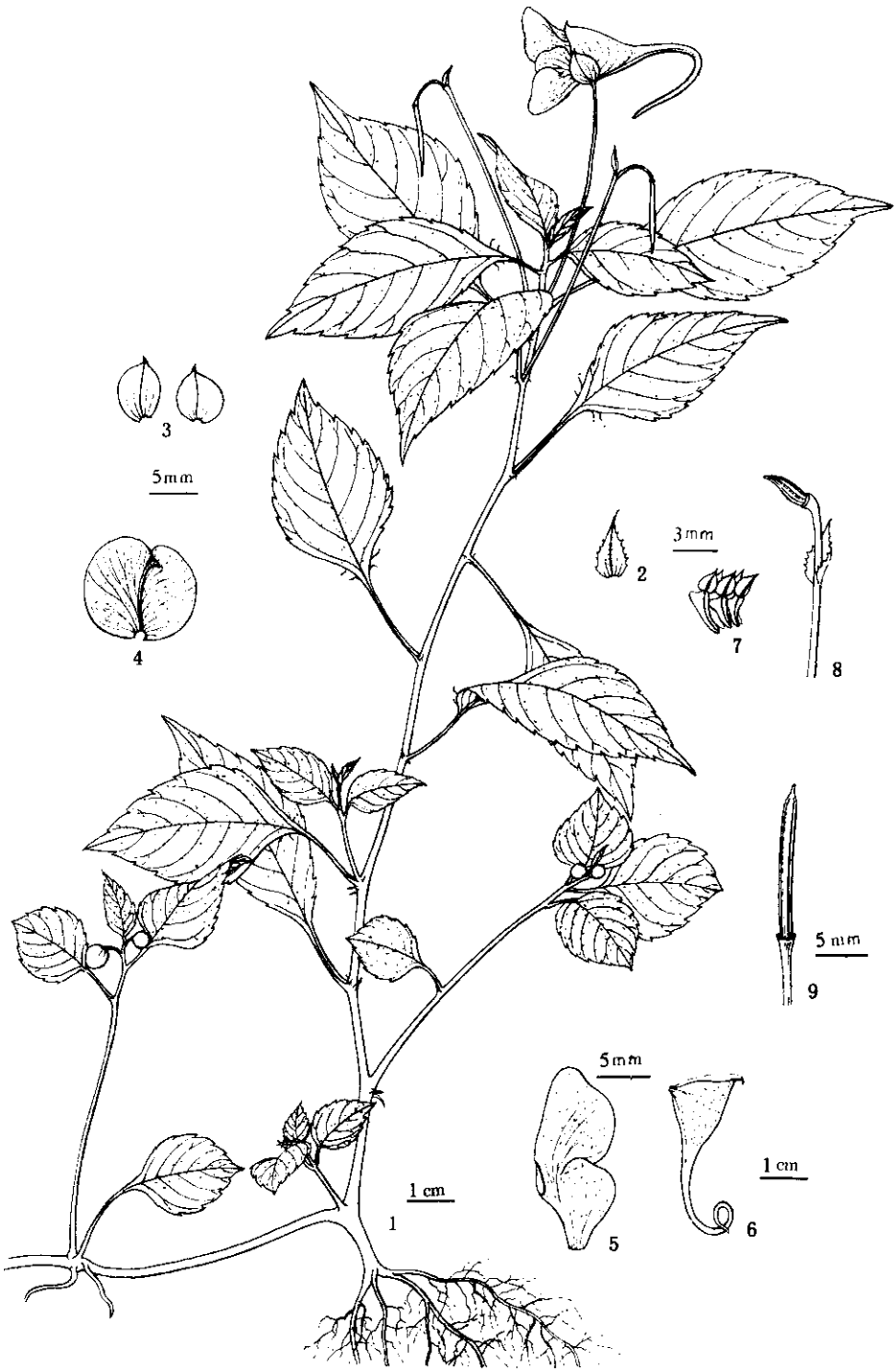

图4 梵净山凤仙花 1. 植株；2. 苞片；3. 侧生萼片；4. 旗瓣；5. 翼瓣；6. 唇瓣；7. 花丝及花药；8. 子房；9. 蒴果。(张泰利 绘)

Fig. 4 *Impatiens fanjingshanica* Y. L. Chen 1. Plant; 2. Bract; 3. Lateral sepal; 4. Standard; 5. Wing; 6. Lip; 7. Filaments & anthers; 8. Ovary; 9. Capsul.

lobis distalibus dolabriformibus facile differt. A *I. reptante* Hook. f. *floribus* purpureis vel caeruleo-purpureis, bracteolis ovatis, denticulatis diversa.

Herba annua, glaberrima. Caulis longe procumbens vel reptans, usque 50 cm longus ramosus, viridis vel purpurascens, nodis inferioribus dialatis, saepe radicantibus. Folia alterna, petiolata, ovata vel ovato-lanceolata, rarius subrhomboidea(2.5)3～8 cm longa, 1.5～3.5 cm lata, apice breviter acuta vel acuminata, basi cuneata, crenato-serrata, mucronulata, basim versus glandulis setiformis 2～3-paribus, nervis lateralibus 5～7-paribus, arcuatis, supra intense viridia ad nervos albo-hispidula, subtus cinereo-viridia, glabra vel ad costam sparse pubescentia. Petiolus 1～2 cm longus, basi glandulis subulatis 1～2-paribus praeditus. Pedunculi tenues in axillam foliorum superiorum solitarii, plerumque foliis breviores, uniflori, superne bracteati. Bracteae ovatae vel ovato-lanceolatae, 4～5 mm longae, 2～2.5 mm latae, apice longe acuminatae, margine minute denticulatae, ad costam dorsalem pilosae. Flores majares, purpurei vel caeruleo-purpurei, 3～4.5 cm expanxi. Sepala lateralia 2, late ovata usque subrotundata, 5～6 mm longa, 4～5 mm lata, apice conspicue apiculata, integra, costa dorsali viridi. Vexillum cuculatum, orbiculare, 11 mm longum et latum, apice leviter emarginatum, costa dorso obscure anguste carinata, superne cuspidata. Alae subsessiles 17 mm longae, 8 mm latae, bilobatae, lobus basalis subrotundatus, distalis amplus late dolabriformis, apice rotundatus; auricula dorsalis prava, semilunata, reflexa. Labellum late infundibulare, ore subhorizotali, circ 20 mm lato, antice mucronulato, basi in calcar 2～2.5 cm longum incurvum sensim attenuatum. Filamenta linearia circ. 3 mm longa; antherae ovaoideae acutae. Ovarium erectum fusiforme, circ 3 mm longum, acuminatum. Capsulae lineari-cylindricae, 2～2.5 cm longae, apice rostellatae. Semina 5～6, oblongo-globosae, 1.5～2.5 mm longae. fuscae, laevia.

Guizhou(贵州): Fanjingshan(梵净山), in declivo herboso humido, alt. 1500 m, 1986-06-06, Sino-America Exped. (中美科考队)2038; Jiangkuo(江口), alt. 680 m, in valle, 1963-10-05, T. P. Chien et T. S. Ying(简焯波,应俊生)32323(PE); Steward, C. Y. Cheao et H. C. Chao 325(PE).

本种外形酷似鸭距草状凤仙花 *I. commellinoides* Hand.-Mazz.,但其苞片卵形,边缘有细齿;侧生萼片顶端具明显尖头;翼瓣近无柄,上部裂片斧形与后者不难区别。花紫色或蓝紫色;苞片卵形且具细齿,与匍匐凤仙花 *I. reptans* Hook. f.亦不同。

5　毛萼凤仙花　新种　图 5

Impatiens trichosepala Y. L. Chen, sp. nov. TYPE: China. Guizhou(贵州), Yongjiang(榕江), ad marginem rivuli in valle vel ad rupes, 1959-08-08, Austro-Guizhou Exped. (黔南队)3398(holotypus, PE). Fig. 5

Species habitu *I. chlorosepalae* Hand.-Mazz. affinis, sed a qua sepalis lateralibus, vexillo et labello flavo-brunneo-pilosis; lobis basalibus alae subrotundatis, distalibus dolabriformibus; foliis anguste lanceolatis vel oblanceolatis valde differt.

Herba annua, 15～25 cm alta. Caulis succulentus, viridis, erectus vel interdum basi ad-

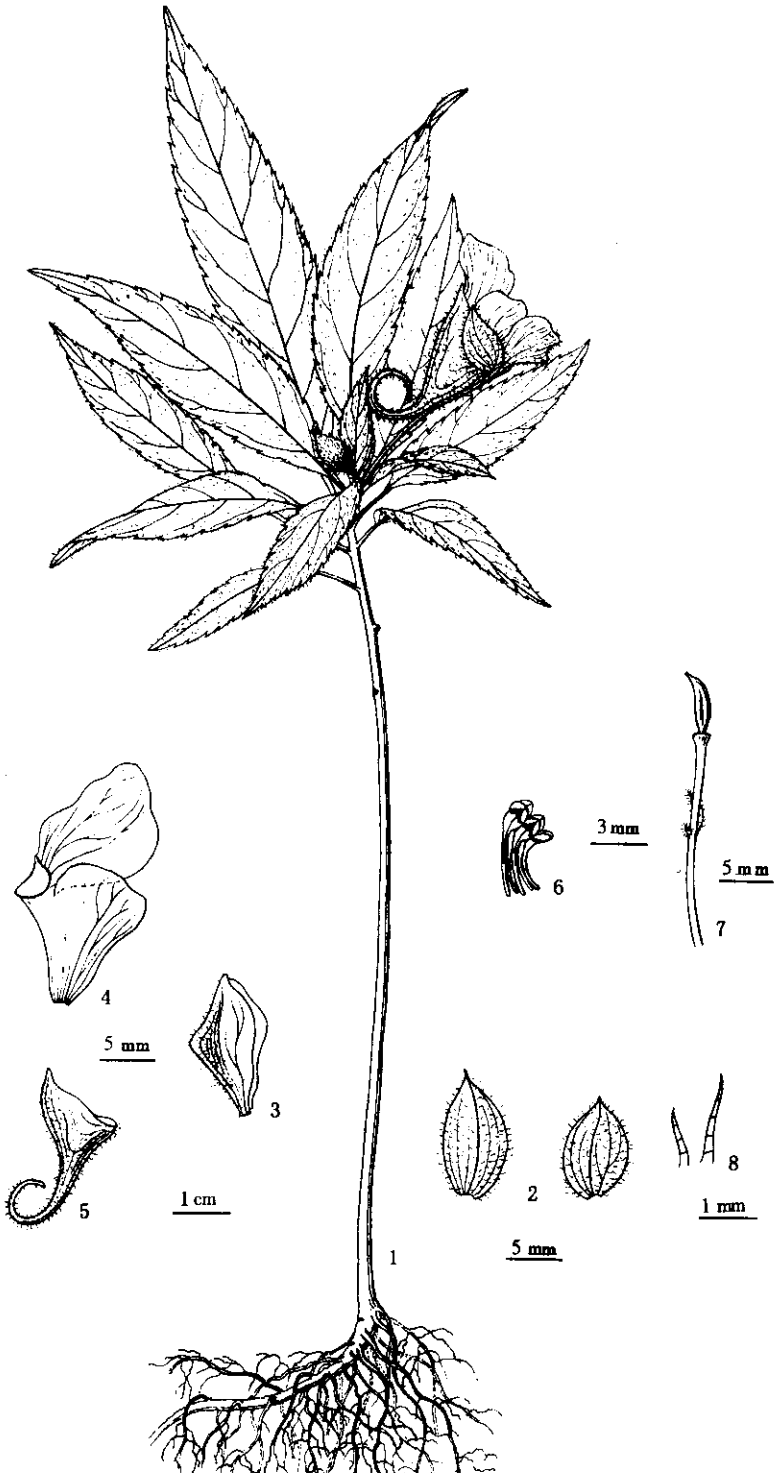

图5 毛萼凤仙花 1. 植株；2. 侧生萼片；3. 旗瓣；4. 翼瓣；5. 唇瓣；6. 花丝及花药；7. 子房；8. 毛。(张泰利 绘)
Fig. 5 *Impatiens trichosepala* Y. L. Chen 1. Plant; 2. Lateral sepal; 3. Standard; 4. Wing; 5. Lip; 6. Filaments & anthers; 7. Ovary; 8. Hairs.

scendens, simplex, superne sparse vel densiuscule flavo-brunneo-pilosus, inferne longe nudus, radices fibrosas numerosas emittens. Folia alterna, saepe versus apices caulium conferta, petiolata, anguste lanceolata vel oblanceolata, 3.5～10 cm longa, 1～2 cm lata, apice acuminata vel breviter caudata, basi breviter attenuata usque cuneata, margine crenato-serrata, mucronulata, basim versus glandulis setiformibus stipitatis 2～3(4)-paribus, nervis lateralibus 7～9-paribus, arcuatis, supra intense viridia, adpresse hispidulia, subtus pallide viridia, sparse pilosa vel ad nervos pilosa, costa nervisque subtus leviter prominentibus; petioli 1～2.5 cm longi, sparse vel densiuscule brunneo-pilosi. Pedunculus in axila foliorum superiorum solitarius, foliis multo brevior, 2.5～3.5 cm longus, sparse pilosus. Pedicelli ad medium vel supra medium bracteati; pedicelli uniflori; bracteae lineares vel lineari-lanceolatae, ciliatae. Flores majores, flavi, 4～4.5 cm expansi. Sepala lateralia 2, flavo-virentia, ovata vel oblongo-ovata, 10～12 mm longa, 6 mm lata, integra, apice breviter cuspidata, 5-nervia, dorso margineque pilis longiusculis multicellularibus. Vexillum cuculatum, orbiculare, 12 mm diam. apice leviter emarginatum, costa dorso conspicue carinata, apice apiculata. dorso sparse pilis longiusculis multicellulalibus. Alae breviter stipitatae vel subsessiles, usque 22 mm longae, 10～12 mm latae, bilobatae, lobus basalis subrorundatus, distalis late dolabriformia, auricula dorsalis semilunata, reflexa. Labellum late infundibulare 20 mm longum, sparse pilosulum, ore oblique adscentente, 20 mm lato, antice acuto, basi in calcar 25 mm longum incurvum sensim constrictum. Filamenta linearia, 5～6 mm longa, superne dilatata; antherae ovoideae, apice obtusae. Ovarium fusiforme, erectum, 4～5 mm longum, breviter rostellatum. Capsula(immatura)lineari-cylindrica.

Guangxi(广西): Mt. Damiao(大苗山), alt. 500 m, ad margienm rivuli in valle, 1959-06-09, Liuzhou Exped.(柳州队)2393, 2687; Mt. Jiuwan(九万山), ad marginem rivuli in valle vel in silva sparsa, 1958-09-01, S. S. Chun(陈少卿)14182, 16615, 15283; D. Z. Chen(陈德昭)771.

本种外形近似绿萼凤仙花 *I. chlorosepala* Hand.-Mazz.,但侧生萼片、旗瓣和唇瓣均被黄褐色短柔毛;翼瓣的基部裂片近圆形,上部裂片宽斧形;叶窄披针形或倒披针形,与后者相区别。

6　贵州凤仙花　新种　图 6

Impatiens guizhouensis Y. L. Chen, sp. nov. TYPE: China. Guizhou(贵州), Fanjingshan, alt. 820～1120 m, in rupibus humidis, 1986-09-09, Sino-America Exped.(中美科考队)1904(holotypus, PE). Fig. 6

Species ex affinitate *I. pritzelii* Hook. f., a qua floribus pallide roseis, sepalis lateralibus exterioribus oblique ovatis, inaequilateralibus, apice cuspidatis incurvatis, costa dorso paullo incrassato, saepe angustissime alato, labello late infundibulari, rubro-punctato, basi in calcar 15～20 mm longum incurvum attenuato differt.

Herba annua, 20～45 cm alta, glaberrima; caulis succulentus, erectus vel interdum ad basim adscendens, inferne robustus, longe nudus, dein foliosus, nodis inferioribus dilatatis.

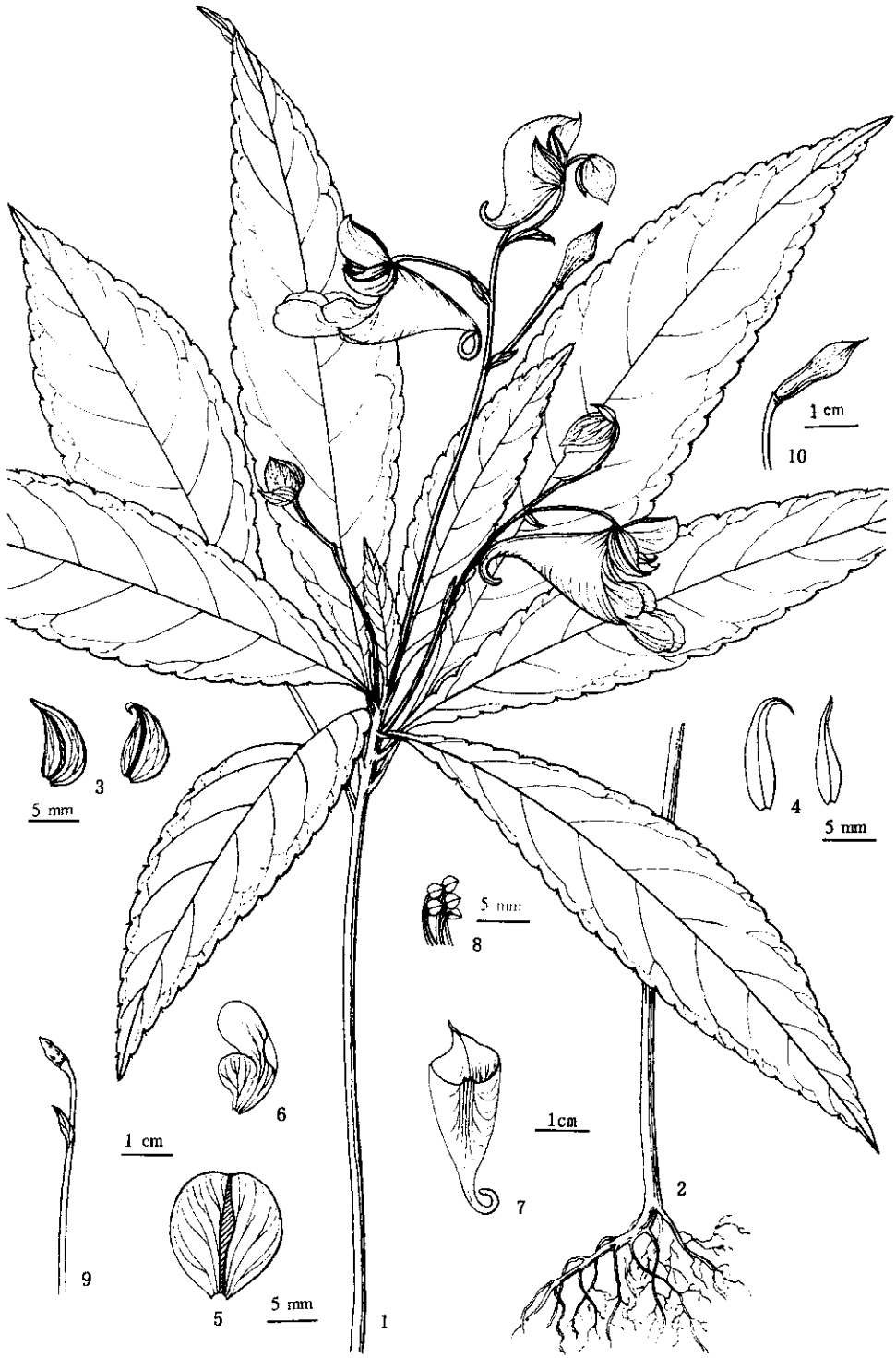

图6 贵州凤仙花 1~2. 植株；3. 外层萼片；4. 内层萼片；5. 旗瓣；6. 翼瓣；7. 唇瓣；8. 花丝及花药；9. 子房；10. 蒴果。(张泰利 绘)

Fig. 6 *Impatiens guizhouensis* Y. L. Chen 1~2. Plant; 3. Outer sepals; 4. Inner sepals; 5. Standard; 6. Wing; 7. Lip; 8. Filaments & anthers; 9. Ovary; 10. Capsul.

Folia versus apicem caulis conferta, alterna, petiolata, membranacea, oblongo-lanceolata vel lanceolata, 8～15(21) cm longa, 2～4 cm lata, basi in petiolum 10～20 mm longum sensim attenuata, apice acuminata, margine grose crennato-dentata, mucronulata; nervis lateralibus paribus 7～9(11), arcuatis, supra intense viridia, subtus plerumque purpurascentia. Pedunculi crassiuscules, in axillis foliorum superiorum solitarii, foliis aequilongi vel longiores, strieti, erecti, 3～8(11)-flori; pedicelli tenues, 15～25 mm longi, fructiferi elongati et adscendentes, superne paullo dilatati, basi bracteati; bracteae ovatae vel cymbiformes, 6～8 mm longae, circ 3 mm latae, acuminatae, deciduae. Flores ad 4～4.5 cm expansi, pallide rosei. Sepala 4, 2 lateralia exteriora oblique ovata, 8 mm longa, 4～4.5 mm lata, inaequilatera, apice cuspidata, incurvata, 5-nervia, costa dorso incrassata, angustissime alata, 2 interiora linearia, hyalina, 11～12 mm longa, 2～2.5 mm lata, uninervia, apice incurvatim apiculata. Vexillum elliptico-obovatum vel suborbiculare, 13 mm longum, 12 mm latum, apice emarginatum, costa dorso supra medium conspicue incrassatum, cristata. Alae subsessiles, breves, 20 mm longae; lobus basalis obovatus, rubro-punctatus, distalis longior, oblongo-dolabriformis; auricula dorsalis semiovata, reflexa. Labellum late infundibulare, 3～3.5 cm longum, rubro-punctatum, ore adscendento, 18～20 mm lato, antice acuto, basi in calcar 15～20 mm longum incurvum attenuatum. Filamenta linearia circ 4 mm longa, Antherae ovoideae, apice obtusae. Ovarium fusiforme, 5～6 mm longum, apice rostellatum. Capsula claviformis, 20～25 mm longa, apice longe rostrata, oligosperma; semina (2)3～4, oblonga, circ 2.5 mm longa atro-fusca, laevia.

Guizhou(贵州): Mt. Fanjing(梵净山), alt. 700～1000 m, in prato silvae, 1986-06-01, Sino-America Exped.(中美科考队)1159(PE); Guangling(关岭), matoumbrosis, S. W. Teng(邓世伟)651(SCBI); Qingzhen(Tsingchen 清镇), S. W. Teng *et al*. 628, 1288 (SCBI).

本种与近缘种湖北凤仙花 *I. prizelii* Hook. f. 的区别在于花淡粉红色；外面 2 枚侧生萼片斜卵形，不等侧，背面中肋增厚，常具极窄的翅；唇瓣宽漏斗状，有红色斑点，基部渐狭成长 15～20 mm 内弯的距。